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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,120

09/25/2006

Shunsuke Nishi

914-218

7081

23117 7590 08/05/2009  
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EXAMINER

ALEMU, EPHREM

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,120	<b>Applicant(s)</b> NISHI ET AL.	
	<b>Examiner</b> Ephrem Alemu	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/25/2006; 6/20/2007; 2/29/2008</u> .                         | 6) <input type="checkbox"/> Other: _____                          |



## **DETAILED ACTION**

### ***Specification***

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

2. Claim 1 is objected to because of the following informalities: In claim 1, line 17, replace "receptacle a load is connectable to" with --receptacle for connecting a load-- to clearly identify the claimed item "isolated operation output terminal" is a receptacle for connecting a load. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyomura et al. (US 7,177,168).

Re claim 1, Toyomura discloses an inverter device (107) having two operation modes including a grid-connected operation mode where the inverter device (107) is interconnected with a commercial power system, and an isolated operation mode where the inverter device is independent of the commercial power system and performs an isolated operation (Col. 4, line 61-Col. 5, line 7), comprising:

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an inverter unit (107) converting direct-current power received from a direct-current power supply (101, 617) into alternating-current power (Figs. 1-11; Col. 4, line 60- Col. 5, line 6; Col. 6, lines 35-41);

a control unit (104) controlling an action of the inverter device (Figs. 1-11; Col. 5, line 7- Col. 6, line 41);

a grid-connected output terminal (106, 311, 312, 407, 406, 801) for outputting the alternating-current power converted by the inverter unit (107), the grid-connected output terminal (106, 311, 312, 407, 406, 801) being a plug connectable to a commercial receptacle, commercial power from the commercial power system being supplied to the commercial receptacle (Figs. 1-11, 16; Col. 1, line 10-18; Col. 6, line 35- Col. 7, line 31); and

an isolated operation output terminal (i.e., socket not shown) for outputting the alternating-current power, the isolated operation output terminal (i.e., socket not shown) being a receptacle for connecting a load, the load being supplied with the alternating-current power (Figs. 1-11; Col. 4, line 28-38; Col. 7, line 35- Col. 8, line 67; specifically Col. 8, lines 33-46).

Although, Toyomura does not mention whether the isolated operation output terminal (i.e., socket not shown) being provided on a path of a power supply line connecting the inverter unit (107) and the grid-connected output terminal (106, 311, 312, 407, 406, 801); Toyomura teaches of installing the inverter (107) in an arbitrary position to supply the alternating power to various loads (Col. 8, lines 33-46).

Therefore, it is deemed to be within a routine skill of an artisan to provide the isolated operation output terminal (i.e., socket not shown) on a path of a power supply line connecting the inverter unit (107) and the grid-connected output terminal (106, 311, 312, 407, 406, 801) for no

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other reason than the inverter unit (107) providing alternating power to the load during an isolated mode of operation.

Re claims 2-7, given the inverter device (107) of Toyomura as discussed above in claim 1, providing a housing having the grid-connected output terminal and the isolated operation output terminal integrally provided therein, wherein the housing includes a plug accommodating unit capable of accommodating the grid-connected output terminal; a switch unit between the isolated operation output terminal (i.e., socket not shown) and the grid-connected output terminal (106, 311, 312, 407, 406, 801) on the path of the power supply line, wherein the control unit brings the switch unit into a non-conduction state when the grid-connected operation mode is terminated; a manipulation unit capable of transmitting to the control unit (104) a signal for instructing a start of an operation of the inverter unit (107), wherein in a case where the control unit receives the signal from the manipulation unit in the isolated operation mode, when the switch unit is in the non-conduction state, the control unit (104) permits the operation of the inverter unit (107); and/or a current detecting unit provided between the inverter unit (107) and the isolated operation output terminal (i.e., socket not shown) on the path of the power supply line, for detecting whether or not a current flows therebetween, wherein the control unit (104) operating the inverter unit for a prescribed period of time when the control unit (104) bringing the switch unit into the non-conduction state, and the control unit (104) continues an operation of the inverter unit when the current detecting unit detects that the current flows for the prescribed period of time deemed to have been obvious for no other reason than the inverter unit (107) providing alternating power to the load during an isolated mode of operation (Figs. 1-11; Col. 4, line 28-38; Col. 7, line 35- Col. 8, line 67; specifically Col. 8, lines 33-46).

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***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kurokami (US 7,079,406); and Takehara et al. (US 6,761,581); teach similar inventive subject matter.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EA  
7-16-09

/Douglas W Owens/  
Supervisory Patent Examiner, Art Unit 2821  
July 18, 2009